APHIS – Plant Protection and Quarantine
California Department of Food and Agriculture
Weekly Situation Report: Light Brown Apple Moth (LBAM)
April 25, 2008

Updates in red

Survey and Diagnostics Information:

Counties	Survey		Diagnostics	
	Number of Traps	Presumptive Positive	Confirmed Positive	
			This Week	Total
Alameda	2,272	0	21	615
Amador	0	0	0	0
Butte	0	0	0	0
Calaveras	0	0	0	0
Colusa	27	0	0	0
Contra Costa	2,582	0	6	191
Del Norte	0	0	0	0
El Dorado	0	0	0	0
Fresno	784	0	0	0
Humboldt	0	0	0	0
Imperial	222	0	0	0
Kern	494	0	0	0
Kings	190	0	0	0
Lake	0	0	0	0
Los Angeles	4,989	0	0	1
Madera	184	0	0	0
Marin	1,569	0	19	178
Mariposa	53	0	0	0
Mendocino	0	0	0	0
Merced	297	0	0	0
Monterey	2,733	0	115	1,553
Napa	1,004	0	0	2
Orange	1,702	0	0	0
Placer	73	0	0	0
Plumas/Sierra	0	0	0	0
Riverside	1761	0	0	0
Sacramento	1,247	0	0	0
San Benito	99	0	0	0
San Bernardino	1,193	0	0	0
San Diego	2,095	0	0	0
San Francisco	176	0	19	5,246
San Joaquin	736	0	0	0
San Luis Obispo	462	0	0	1
San Mateo	2,570	0	11	168
Santa Barbara	1,619	0	0	3
Santa Clara	5,401	0	6	45
Santa Cruz	3,546	0	189	12,829

Counties	Survey		Diagnostics	
	Number of Traps	Presumptive Positive	Confirmed Positive	
			This Week	Total
Shasta	197	0	0	0
Siskiyou	0	0	0	0
Solano	330	0	0	10
Sonoma	906	0	1	2
Stanislaus	256	0	0	0
Sutter	110	0	0	0
Tehama	60	0	0	0
Trinity	0	0	0	0
Tulare	711	0	0	0
Tuolumne	15	0	0	0
Ventura	545	0	0	0
Yolo	171	0	0	0
Yuba	0	0	0	0
Total	43,381	0	381	20,844

- **Survey**
  - Survey teams continue to implement a rigorous detection and delimiting survey for the light brown apple moth (LBAM), *Epiphyas postvittana*, in **38** counties.

  - A total of **43,381** pheromone-baited traps are placed in and around retail and production nurseries, at ports of entry, and in the open environment and are being inspected bi-weekly.

  - Visual inspections of all nurseries located within 1.5 miles from any traps with confirmed LBAM are conducted for the presence of any life stages.

- **Identification and Diagnostics**
  - A total of **20,844** moths have been confirmed to date as LBAM.
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  - LBAM immature life stages, including larvae and pupae have been found in a total of **60** nurseries, cut flower or greenery farms in Alameda, Contra Costa, Marin, Monterey, San Francisco, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, and Solano counties. Infested nurseries have the option to treat and be re-inspected as part of the regulatory requirements.

Operational Update:

- **Technical Working Group (TWG)**
  - The TWG met on December 13 and 14, 2007 in San Diego to review program progress and made recommendations designed to provide short and long-term

plans to contain, control, and eradicate LBAM in California. TWG recommendations include the use of pheromone as the primary control strategy, while developing long-term control methods such as sterile insect technology.

- A field trial designed to measure the efficacy of several pheromone formulations is underway in New Zealand. Data from the trial will be used to select the most efficacious and suitable pheromone formulations for the 2008 program treatments.
- The TWG is scheduled to meet again the week of May 5, 2008.

- **Program Resources**
  - A total of **194** personnel are on-site (129 Counties and CDFA; and **65**-APHIS) assuming various roles within the emergency program structure.

- **Regulatory Actions**
  - CDFA, APHIS, and County personnel continue to conduct inspections and certification of host commodities in the quarantine areas as required by State LBAM regulations and by the Federal Quarantine Order.
  - To date, a total of **1,356** compliance agreements have been issued to establishments located within the quarantine area requiring regular inspections of all nursery stock and other host materials.

- **Treatment**
  - Nurseries with host plants that are confirmed as infested with LBAM larvae or pupae have the option of treating with Chlorpyrifos or destroying infested plants.
  - In fall 2007 -
    - Three ground applications of *Bacillus thuringiensis* (Bt) were made in Oakley (141 properties) and Napa (71 properties).
    - Hand-applied pheromone applications of Isomate-LBAM (twist-ties) were used in Oakley, Napa, Danville, Dublin, San Jose, Sherman Oaks, and Vallejo/Mare Island.
    - Two aerial applications of the pheromone Checkmate OLR-F were made in Marina, Seaside, Sand City, Del Rey Oaks, Monterey and Pacific Grove areas of Monterey County, with approximately 36,500 acres having been treated each time.
    - One aerial application was also completed in North Salinas/Boronda and the Prunedale/Royal Oaks.
  - 2008 treatment plans –
    - Hand and ground applications of pheromone are scheduled for April 2008.
    - Until a FONSI has been signed, no aerial treatments of pheromone will be scheduled. It is anticipated that this would not occur until summer.
    - Pheromone formulations will be selected based on efficacy data currently being generated in the on-going New Zealand trial.

- **Environmental Assessment and Monitoring**
  - The Programmatic Environmental Assessment conducted for the LBAM mating disruption (pheromone) program was posted on the APHIS website on February 14, 2008. Public comments are welcomed for thirty days.
  - A supplemental Programmatic Environmental Analysis that addresses aerial application of pheromone is planned to be released for public comments around April 30, 2008.
  - Pheromone applications will commence only after all toxicological and environmental analyses have been completed and results confirm no risk to public health and the environment.

Trade Update:

- On May 24, 2007, Mexico suspended importation of certain LBAM host crops commodities – primarily fruits and nursery stock – from the quarantined counties in California and Hawaii and has required additional inspection and certification of commodities originating from outside quarantined counties.
- The Canadian Food Inspection Agency (CFIA) announced on Friday June 15, 2007, its LBAM requirements for host commodities exported to Canada. Details of the requirements are posted on the CFIA website at http://www.inspection.gc.ca/english/plaveg/pestrava/lbampbpp/lbampbppe.shtml
- On March 24, 2008, Mexico verified phytosanitary compliance measures required for importation of LBAM host products originating from California and Hawaii, including LBAM regulated areas. Compliance measures include a monitoring system, integrated pest management, products sent in closed containers and sealed at origin, PC with AD that product was inspected and found free of any biologic instars of LBAM, inspection at Mexico POE. Mexico has accepted the trapping protocol of the Federal Domestic Order.

  For host plant propagative material, cut flowers, and foliage from regulated areas, SAGARPA will conduct site visits for sampling verification. These products may be shipped if grown outside the 1.5 mile area from a detection provided there is a minimum of 1 trap/5 acres at each production site. Host fruits and vegetables for consumption from regulated areas (within the 1.5 mile area) are subject to all measures except the 1 trap/5 acre density and the SAGARPA site visit at origin.

- On January 25, 2008 the Canadian Food Inspection Agency (CFIA) posted the 3rd revision to D-07-03 - Plant Protection (Phytosanitary) Import Requirements to Prevent the Entry of Epiphyas postvittana (Walker) (light brown apple moth). This directive contains the phytosanitary import requirements to prevent the entry and spread of light brown apple moth (Epiphyas postvittana) into Canada. The directive outlines requirements for the importation of host species that may contain life stages of light brown apple moth (LBAM).

This directive has been revised to include additional definitions as well as a clarification of language. A provision of a Certificate of Origin in place of a Phytosanitary Certificate has been added for certain commodities originating from non-regulated counties in California along with a map of the areas in California that are regulated for LBAM. This version of the directive also includes the LBAM import requirements for all other countries where LBAM is known to occur. This directive has also been revised to update the list of taxa regulated for LBAM.

On April 3, 2008 that Appendix 2 "List of Areas Regulated for Light Brown Apple Moth" of Directive D-07-03 "Plant Protection (Phytosanitary) Import Requirements to Prevent the Entry of Epiphyas postvittana (Walker) (light brown apple moth)" has been revised and is available on the web at ***http://www.inspection.gc.ca/english/plaveq/protect/dir/lbamareae.shtml***

- China and South Korea have made inquiries about the LBAM program.

Communication and Outreach:

- CDFA and APHIS public information officers continue to provide information and field questions regarding the 2008 LBAM program plans in California.
- Legal notice announcing availability of the Environmental Assessment for the Light Brown Apple Moth in California was published in several California newspapers on February 14, 2008.
- APHIS is currently addressing public comments received regarding the Environmental Assessment on the proposed 2008 LBAM program.
- Comments are being accepted and responses are being developed for the Programmatic Environmental Assessment.

Background:

- On February 6, 2007, a private citizen near Berkeley in Alameda County, California, reported that two suspect moths had been captured in a blacklight trap on his property.
- In response, pheromone-baited traps were placed on March 1, 2007, in Alameda and Contra Costa counties. Trap inspections began March 7, 2007.
- On March 16, 2007, the ARS Systematic Entomology Laboratory (SEL) in Washington, DC, confirmed through morphological testing that the two samples submitted were, in fact, LBAM.
- CDFA established on April 20, 2007 a LBAM quarantine of at least 182 square miles in Alameda, Contra Costa, San Francisco, Marin and Santa Clara counties. The quarantine is expected to expand to include Monterey, Santa Cruz and San Mateo counties.
- APHIS issued a LBAM Federal Quarantine Order on May 2, 2007, requiring inspection and certification of all nursery stock and host commodities from eight

counties in California, including Alameda, Contra Costa, Marin, Monterey, San Francisco, San Mateo, Santa Clara, and Santa Cruz counties.

- A Technical Working Group (TWG) consisting of subject matter experts from Australia, New Zealand, and the United States was established to provide APHIS and CDFA technical recommendations. The TWG toured the infested region on May 16 and concluded with a two-day meeting on May 17-18 in San Jose, California. Recommendations designed to provide short and long-term plans to contain, control, and eradicate LBAM in California were forwarded to APHIS and CDFA.
- The light brown apple moth (LBAM), *Epiphyas postvittana*, is a native pest of Australia and is now widely distributed in New Zealand, the United Kingdom, Ireland, and New Caledonia. Although it was reported in Hawaii in the late 1800s, the LBAM find in California is the first on the US mainland.
- LBAM has a host range in excess of 120 plant genera in over 50 families, including nursery stock, cut flowers, fruits, and vegetables.
- LBAM could cause an estimated $160 to $640 million annually in crop damage and control costs if it spreads to agricultural production area in the 11 affected counties and up to $2.4 billion in California.